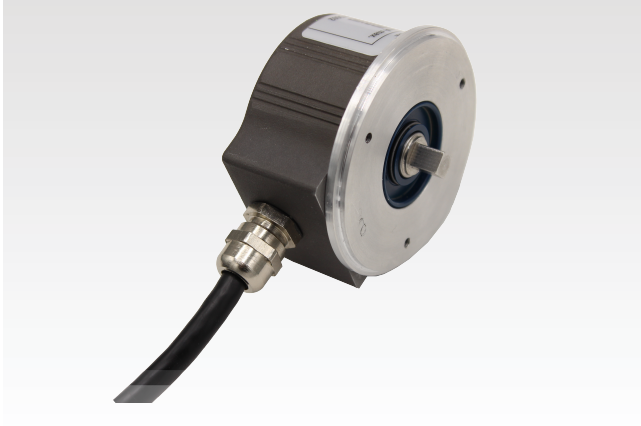


Absolute encoders - Joystick

Shaft with synchro and square flange
Optical single turn 8 bit encoder

FNC APA 61S Series



Features

- Absolute encoder with parallel interface
- Optical sensing
- Resolution: 8 bit /Singleturn
- Optional Preset input
- Optional Direction input

Technical data - electrical ratings

Voltage supply	5V to 30V DC
Protection:	Reverse & over voltage Output short circuit
Consumption w/o load	≤90 mA (outputs unloaded)
Interface	Parallel
Resolution (steps/turn)	8 bit
Absolute accuracy	≤ ±0.35°
Sensing methode	Optical
Code	Binary
Inputs	Direction Pot (CW/CCW) Preset Button (Zero)
Initializing time	Typ. 15 ms after power on
Max. responese freq.	1 kHz
Output capacity	16mA (sink/source)
Output circuit	Push-Pull (opt. Open-Collector)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	CE
Working Angle Range	± 90 ° (Binary Version) ± 121,5° (Gray Version)

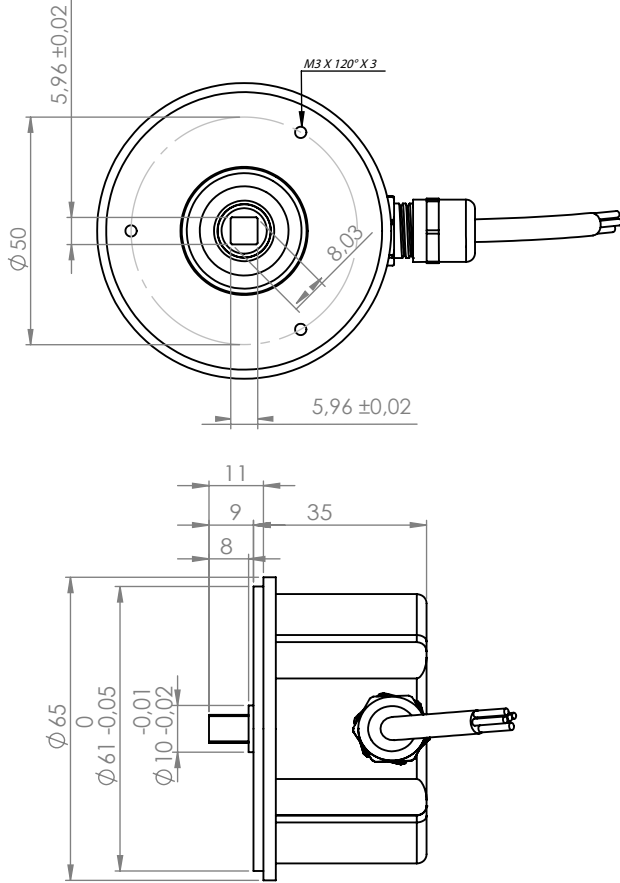
Technical data - mechanical design

Dimensions (flange)	ø61 mm
Shaft loading	≤ 20 N axial ≤ 30 N radial
Protection DIN EN 60529	IP 54 (optional IP65)
Operating speed	≤ 3000 rpm
Starting torque	≤ 0.001 Nm
Materials	Housing, Flange : Aluminium Shaft : Aluminium
Shaft	5,96 mm (Square)
Bearings lifetime:	2x10 ⁹ rev. at 100% of full rated shaft load (minimum)
Operating temperature	-20 to +85 °C
Weight approx.	258.75 g

Note: Custom (non-binary) resolutions can be implemented on request. eg. 360 or 1000.

FNC APA 61S Series

Mechanical Dimensions



Cable Wiring / Connector

Function	Connector	Color	Renk
+VB	pin 1	Brown	Kahve
GND	pin 2	White	Beyaz
Bit 0	pin 3	Green	Yeşil
Bit 1	pin 4	Green-Black	Yeşil-Siyah
Bit 2	pin 5	Yellow	Sarı
Bit 3	pin 6	Yellow-Black	Sarı-siyah
Bit 4	pin 7	Blue	Mavi
Bit 5	pin 8	Blue-Black	Mavi-Siyah
Bit 6	pin 9	Orange	Turuncu
Bit 7	pin 10	Orange-Black	Turuncu-Siyah
Right	pin 15	Gray	Gri
Left	pin 16	Gray-Black	Gri-Siyah

NOTE : Preset and Direction inputs are optional

Connector is free hanging, inline type

Encoder Part Number

FNC A PA 61 S B

Absolute

PA: Parallel

Housing:
61 : 61 mm

Flange Type:
S: Servo flange

B : Binary
G : Gray